

IFW RECEIPT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/566,661 Confirmation No.: 5945
Applicant(s): Courtin et al.
Filed: 01/31/2006
Art Unit: 2833
Examiner:
Title: Electric Contact Crimping Method and Contact Obtained
According to Said Method

Attorney Docket No.: 003D.0085.U1 (US)
Customer No.: 29,683

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Request For Corrected Filing Receipt

Sir:

This is in response to the Filing Receipt (copy enclosed) received in regard to the above-identified patent application. The Filing Receipt contains an error.

The title is incorrect. Please correct the title to read:
Electric Contact Crimping Method And Contact Obtained
According To Said Method.

Attached are copies of the first page of the Transmittal Letter, PCT Publication and application as filed displaying the correct title. Please send the undersigned a corrected Filing Receipt.

Thank you.

Respectfully submitted,

Mark F. Harrington

Mark F. Harrington (Reg. No. 31,686)

12/9/06

Date

Customer No.: 29683

Harrington & Smith, LLP
4 Research Drive
Shelton, CT 06484-6212
203-925-9400

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail on the date shown below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

12/11/2006
Date

Mark F. Harrington
Name of Person Making Deposit



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

APPL NO.	FILING OR 371 (C) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/566,661	01/31/2006	2833	900	003D.0085.U1(US)	3	11	1

29683
 HARRINGTON & SMITH, LLP
 4 RESEARCH DRIVE
 SHELTON, CT 06484-6212

CONFIRMATION NO. 5945

FILING RECEIPT



OC000000021386334

Date Mailed: 11/29/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Thierry Courtin, Le May Sur Evre, FRANCE;
 El Mostafa Zindine, Le Mans, FRANCE;
 Flavio Fantini, Puteaux, FRANCE;

RECEIVED

DEC 02 2006

Power of Attorney: The patent practitioners associated with Customer Number 29683. **HARRINGTON & SMITH, LLP**

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/FR04/00631 03/15/2004

Foreign Applications

FRANCE 03/10011 08/19/2003

If Required, Foreign Filing License Granted: 11/28/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/566,661**

Projected Publication Date: 03/08/2007

Non-Publication Request: No

Early Publication Request: No

Title

Electric **contract** crimping method and contact obtained according to said method

Preliminary Class

439

X CONTACT

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

**LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15**

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

Title

Electric contract crimping method and contact obtained according to said method

Preliminary Class

439

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

ATTORNEY'S DOCKET NUMBER

003D.0085.U1(US)

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A SUBMISSION UNDER 35 U.S.C. 371**

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

INTERNATIONAL APPLICATION NO.
PCT/FR2004/000631INTERNATIONAL FILING DATE
15 March 2004PRIORITY DATE CLAIMED
19 August 2003

TITLE OF INVENTION

Electric Contact Crimping Method and Contact Obtained According to Said Method

APPLICANT(S) FOR DO/EO/US

Thierry COURTIN, El Mostafa ZINDINE, Flavio FANTONI

DEC 13 2006
PCT/FR2004/000631
U.S. PATENT & TRADEMARK OFFICE

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.
2. This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.
3. This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. The US has been elected (Article 31).
5. A copy of the International Application as filed (35 U.S.C. 371 (c)(2))
 - a. is attached hereto (required only if not communicated by the International Bureau).
 - b. has been communicated by the International Bureau.
 - c. is not required, as the application was filed in the United States Receiving Office (RO/US).
6. An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. is attached hereto.
 - b. has been previously submitted under 35 U.S.C. 154(d)(4).
7. Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. are attached hereto (required only if not communicated by the International Bureau).
 - b. have been communicated by the International Bureau.
 - c. have not been made; however, the time limit for making such amendments has NOT expired.
 - d. have not been made and will not be made.
8. An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. A copy of the International Search Report (PCT/ISA/210).

Items 13 to 23 below concern document(s) or information included:

13. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. A FIRST preliminary amendment.
16. A SECOND or SUBSEQUENT preliminary amendment.
17. A substitute specification.
18. A power of attorney and/or change of address letter.
19. A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.
20. A second copy of the published International Application under 35 U.S.C. 154(d)(4).
21. A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).
22. Express Mail Label No. EV 749 833 410 US

(12) DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITÉ DE COOPÉRATION
EN MATIÈRE DE BREVETS (PCT)

(19) Organisation Mondiale de la Propriété
Intellectuelle
Bureau international



(43) Date de la publication internationale
31 mars 2005 (31.03.2005)

PCT

(10) Numéro de publication internationale
WO 2005/029653 A1

(51) Classification internationale des brevets⁷ : **H01R 43/048**

(21) Numéro de la demande internationale : **PCT/FR2004/000631**

(22) Date de dépôt international : 15 mars 2004 (15.03.2004)

(25) Langue de dépôt : français

(26) Langue de publication : français

(30) Données relatives à la priorité :
03/10011 19 août 2003 (19.08.2003) FR

(71) Déposant (*pour tous les États désignés sauf US*) : FCI [FR/FR]; 145/147 rue Yves Le Coz, F-78000 Versailles (FR).

(72) Inventeurs; et

(75) Inventeurs/Déposants (*pour US seulement*) : COURTIN, Thierry [FR/FR]; 26, rue François Rabelais, F-49122 le May Sur Evre (FR). ZINDINE, El Mostafa [FR/FR]; 36, rue Robert Desnos, F-72000 Le Mans (FR). FANTINI, Flavio [FR/FR]; 86, avenue du Général de Gaulle, F-92800 Puteaux (FR).

(74) Mandataire : THEBAULT, Jean-Louis; Cabinet Schmit Chretien Schihin SNC, 111, cours du Medoc, F-33300 Bordeaux (FR).

(81) États désignés (*sauf indication contraire, pour tout titre de protection nationale disponible*) : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) États désignés (*sauf indication contraire, pour tout titre de protection régionale disponible*) : ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), eurasien (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), européen (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Déclarations en vertu de la règle 4.17 :

- relative au droit du déposant de revendiquer la priorité de la demande antérieure (règle 4.17.iii)) pour la désignation suivante US
- relative à la qualité d'inventeur (règle 4.17.iv)) pour US seulement

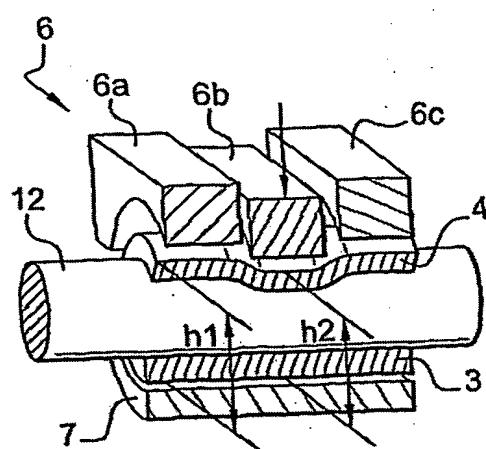
Publiée :

- avec rapport de recherche internationale

[Suite sur la page suivante]

(54) Title: ELECTRIC CONTACT CRIMPING METHOD AND CONTACT OBTAINED ACCORDING TO SAID METHOD

(54) Titre : PROCÉDÉ DE SERTISSAGE DE CONTACT ELECTRIQUE ET CONTACT OBTENU PAR CE PROCEDE



(57) Abstract: The invention relates to a an electric contact crimping method carried out on an electric wire, said contact comprising a crimped section provided with a barrel (3) for receiving the electric wire (2), said barrel comprising a part which is used to clasp the wire by deformation. The method comprises a first crimping stage for a localized area of the crimping section carried out at a first crimping height (h1) folding a first surface of the crimping section on the wire (2) by means of a crimping tool comprising a first stamping element (6) and an anvil (7) and a second crimping stage carried out at a second crimping height (h2) which is lower than the first. The invention also relates to a contact obtained according to said method.

(57) Abrégé : - L'objet de l'invention est d'une part un procédé de sertissage de contact électrique sur un fil électrique, le contact comportant une section de sertissage munie d'un fût (3) de réception du fil (2) électrique, le fût comportant une partie destinée à enserrer le fil par déformation, le procédé comportant une première étape de sertissage à une première hauteur de sertissage (h1) en repliant une première surface de la section de sertissage sur le fil (2) par un outil de sertissage comportant un poinçon (6) et une enclume (7) et une seconde étape de sertissage à une seconde hauteur de sertissage (h2), inférieure à la première, d'une région localisée de la section de sertissage et d'autre part un contact obtenu par ce procédé.

WO 2005/029653 A1

ELECTRIC CONTACT CRIMPING METHOD AND CONTACT OBTAINED ACCORDING TO SAID METHOD

The present invention concerns an electric contact crimping method and the contact obtained by this method.

It is known how to create an electric contact between an electric wire, particularly a multistranded wire, and a metal contact element by a crimping operation for which wings cut out of the metal contact element are bent around the stripped electric wire by means of a crimping tool of the stamp-anvil type. This technique is applied to contacts made from a metal blank that has been cut and bent.

Document US 5,561,267 concerns, for example, a contact to be crimped comprising wings of different size permitting covering one crimping wing onto another and a crimping method with a specially designed stamp-anvil tool.

The crimped contacts encounter problems of reliability in low current and low voltage applications and more particularly, microcracks appear over time. It has been shown that crimping can lose its efficacy due to an elastic spring back phenomenon of the crimping wings which causes a reduction of the contact pressure between the wings and the strands of crimped wire and can lead to increases or instabilities of contact resistance, or even losses of electrical contact.

Document US 5,025,554, for its part, concerns a crimping to which soldering paste has been added in order to improve electrical conduction. The problem of such a combination is the difficulty of placing a small quantity of the soldering paste at specific sites in an automated crimping process in a production line of automobile wiring and at the cadences associated therewith.